L 23082-66

ACC NR: AP5028999

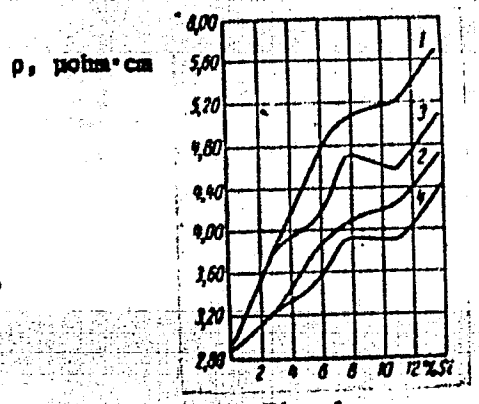


Fig. 1

Card 2/4

L 23082-66

ACC NR: AP5028999

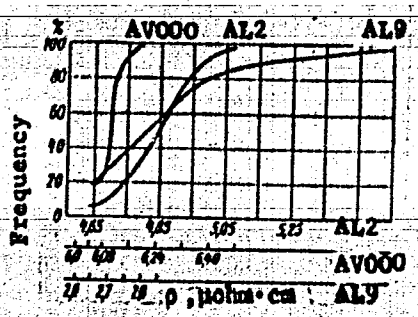


Fig. 2 Resistivity

Card 3/4

L 23082-66

ACC NR: AP5028999

neous structure: in AL2, the grains of α-solid solution of Si in Al and a large amount of eutectic (α + Si) and in AL9, the α-solid solution and the eutectic α + Mg_2Si + Si. Annealing at 290°C for 4 hr reduces by 11-18% the mean ρ of the alloys AL2 and AL9 owing to the relieving of the casting stresses, segregation of impurities into autonomous phases from the supersaturated solid solution, equalization of the chemical composition of the grains and reduction in the number of nonequilibrium vacancies owing to diffusion processes, but, contrary to the expectations it did not result in any marked decrease in the scatter of the values of ρ. Apparently, in Al-Si alloys electric properties fundamentally determine the character of structure. Of the technological factors, only mold temperature seems to have any appreciable effect on the scatter of ρ in the alloys AL2 and AL9. Thus, the alloys AL2 and AL9 may be used as rotor linings only if they do not have to meet rigid requirements as to the stability of the ρ of the "squirrel cage". Pure Al assures a stable ρ (within ±2%) but it is not as strong. Orig. art. has: 3 tables, 2 figures.

SUB CODE: 09, 11, 13, 20/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 001

Card 4/4 fw

ROGINSKAYA, Yu.Ye.; VENEVTSEV, Yu.N.; ZHDANOV, G.S.

New ferromagnetic substances. Zhur. eksp. i teor. fiz. 48 no.5: 1224-1232 My '65. (MIRA 18:7)

1. Nauchno-issledovatel'skiy fiziko-khimicheskoy institut imeni L. Ya. Karpova, Moskva.

CHETKINA, L.A.; GOL'DER, G.A.; ZHDANOV, G.S.

Crystalline structure of 1.5-dibromanthraquinone. Kristallografiia 8 no.2:194-200 Mr-Ap '63. (MIRA 17:8)

1. Fiziko-khimicheskiy institut imeni Karpova.

KAPYSHEV, A.G.; VENEVTSEV, Yu.N.; SOLOV'YEV, S.P.; GORBUNOV, L.A.; ZHDANOV, G.S.

X-ray chambers for high-temperature studies. Zav. lab. 30 no.10: 1274-1276 '64. (MIRA 18:4)

1. Nauchno-issledovatel'skiy fiziko-khimicheskiy institut imeni Karpova.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620008-3"

SOURCE: AN SSSR.Izvestiya.Ser.fizicheskaya.v.29. no.6, 1965.1022-1025

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620008-3"

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620008-3"

than A-sites as might have been expected. Superexchange interactions

[illegible] of the B-type ions were observed at $CdMnO_3$ concentra-

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620008-3"

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620008-3"

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620008-3"

ures and 1 table.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620008-3"

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620008-3"

VERTSNER, V.N.; VORONA, Yu.M.; ZHDANOV, G.S.

Using an EM-7 electron microscope to study crystal lattices and observe dislocations in them. Stekloobr. sost. no.1:81-83 '63. (MIRA 17:10)

TOMASHPOL'SKIY, Yu.Ya.; VENEVTSEV, Yu.N.; ZHDANOV, G.S.

Microelectron diffract'on study of the crystalline structure of the ferromagnetic Bi Fe O_3. Kristallografiia 9 no.6:846-852 N-D '64. (MIRA 18:2)

1. Fizikc khimicheskiy institut imeni Karpova.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620008-3"

VORONA, Yu.M.; ZHDANOV, G.S.; VERTSNER, V.N.

Characteristics of studying crystal lattices with the EM-5 electron microscope. Zav.lab. 30 no.12:1480-1482 '64.

(MIRA 18:1)

VENEVTSEV, Ya.N.; ROGINSKAYA, Yu.Ye.; VISKOV, A.S.; IVANOVA, V.V.; TOMASHPOL'SKIY, Yu.Ya.; SHVOYNEVA, L.I.; KAPYSHEV, A.G.; TEVEROVSKIY, A. Yu.; ZHDANOV, G.S.

New lead-containing perovskite compounds of complex composition. Dokl. AN SSSR 158 no.1:86-88 S-O '64 (MIRA 17:8)

1. Fiziko-khimicheskiy institut imeni L. Ya. Karpova. Predstavleno akademikom N.V. Belovym.

MESHKOV, A.M.; ZHDANOV, G.S.

Structure of biphenyl and triphenyl methane dyes with n-type and p-type conductivity. Fiz. tver. tela 6 no.6:1907-1908 Je '64. (MIRA 17:9)

1. Gosudarstvennyy opticheskiy institut imeni Vavilova, Leningrad.

ACCESSION NR: AT4019289 S/0000/63/003/001/0081/0083

AUTHOR: Vertsner, V. N.; Vorona, Yu.M.; Zhdanov, G. S.

TITLE: Use of the EM-7 electron microscope for the investigation of crystal lattices and observation of dislocations

SOURCE: Simpozium po stekloobraznomu sostoyaniyu. Leningrad, 1962. Stekloobraznoye sostoyaniye, vy*p.1. Katalizirovannaya kristallizatsiya stekla (Vitreous state, no.1: Catalyzing crystallization of glass). Trudy* simpoziuma, v.3, no.1. Moscow, Izd-vo AN SSSR, 1963, 81-83 insert page between p. 80 and 81

TOPIC TAGS: glass, lattice structure, electron microscopy, dislocations, lattice dislocation, crystal lattice, copper phthalocyanin

ABSTRACT: The interlayer spacings were measured and dislocations were observed in copper phthalocyanin crystals by means of an EM-7 electron microscope in which the resolution was increased to 10 Å. Increasing the excitation of the objective to 4000 ampere-turns considerably decreased astigmatism, and spherical and chromatic aberrations. The electron microscope was used at 60 kV with a diaphragm 30-microns in diameter, at a beam current of 20 microamperes. Magnification

Card 1/2

ACCESSION NR: AP4039692 S/0181/64/006/006/1907/1908

AUTHORS: Meshkov, A.M.; Zhdanov, G. S.

TITLE: Structure of layers of di and triphenylmethane pigments with n and p type conductivity

SOURCE: Fizika tverdogo tela, v. 6, no. 6, 1964, 1907-1908

TOPIC TAGS: diphenylmethane, triphenylmethane, pigment, n type conductivity, p type conductivity, electron microscope, electron diffraction, Siemens Elmiskop I microscope

ABSTRACT: Electron microscope and electron diffraction studies were conducted on reflecting and dispersing layers of brilliant green and crystalline violet diphenylmethane and triphenylmethane pigments to ascertain the forms of their aggregations. The Siemens Elmiskop I electron microscope was used. Reflecting layers were produced by precipitation from ethyl alcohol solution on a charcoal plate. After a 20-30 minute exposure to ethyl alcohol vapors (in air and in vacuum), these layers acquired p-type conductivity. An investigation of photographs and electron-diffraction patterns of reflecting layers not exposed to the vapors proved them to be completely uniform and amorphous. After their

ACCESSION NR: AP4039692

exposure, the layers were transformed into aggregates of microcrystals 0.05-0.3 μ in size. Their diffraction patterns represented sharply defined rings. It follows that the change in the conductivity from n-type to p-type is intimately related to the structural changes in the solid pigment layers, as was previously proven for metal-free layers of phthalocyanin by V. S. My*l'nikov and Ye. K. Putseyko (FTT, 4, 772, 1962). Orig. art. has: 1 table.

ASSOCIATION: Gosudarstvenny*y opticheskiy institut im. S. M. Vavilova Leningrad (State Optical Institute)

SUBMITTED: 28Jan64

ENCL: 00

SUB CODE: MT,SS

NO REF SOV: 005

OTHER: 000

Card 2/2

ACCESSION NR: AP4030634 S/0048/64/028/004/0630/0635

AUTHOR: Venevtsev,Yu.N.; Lyubimov,V.N.; Solov'yev,S.P.; Zhdanov,G.S.

TITLE: Calculation of the internal electric fields and their gradients in perovskite compounds with distinctive dielectric properties [Report, Symposium on Ferromagnetism and Ferroelectricity held in Leningrad 30 May to 5 June 1963]

SOURCE: AN SSSR. Izv.Ser.fiz., v.28, no.4, 1964, 630-635

TOPIC TAGS: internal field, crystal internal field, perovskite structure, ferroelectricity, ionic ferroelectricity model, ferroelectric compound

ABSTRACT: For a number of years the authors have been engaged in calculating the internal electric fields in compounds having the perovskite structure and peculiar dielectric properties. The methods of calculation and the results have been reported in a series of papers appearing in Kristallografiy (Crystallography) and Fizika tverdogo tela (Solid State Physics) from 1958 to 1962. The results of these calculations are discussed in the present paper. The calculations were based on the ionic model of a crystal with known or assumed structure. The charges and polarizabilities of the point ions were treated as given quantities, but the induced dipole moments

Card 1/3

ACCESSION NR: AP4030634

were calculated. Calculations were performed for several values of the charge, polarizability, and radius of the ions; reasonable variations of these parameters did not alter the qualitative picture of the fields in the six compounds investigated (lead, barium, calcium and cadmium titanates, sodium tantalate, and lead zirconate). Good agreement was obtained between observed and calculated values of the spontaneous polarization with the value 0.5 for the ionic charge factor. The results of the calculations indicate that $NaTaO_3$ and $CdTiO_3$ are ferrielectric materials and that $PbZrO_3$ is a ferrielectric material with nearly antiferroelectric properties. The internal field at the position of the Ti ion was found to vanish in $CaTiO_3$ but to be large in $BaTiO_3$ and $PbTiO_3$. This difference in the fields accounts for the different dielectric behavior of these materials. Because of the strong field at the Ti ion, the conclusion of H.D.Megaw (Acta crystallogr.,5,739,1952; Ibid.,7,187,1954) that the principal factor in ferroelectric transitions of ABO_3 type materials must be a sharp increase in the covalent character of the B-O bond is regarded as inadequately grounded. It is concluded that further theoretical and experimental investigation of the possibilities of the ionic model is desirable, and improved calculations of field gradients are promised for the near future. Orig.art.has: 1 table.

Card 2/3

ACCESSION NR: AP4030644 S/0048/64/028/004/0683/0690

AUTHOR: Venevtsev, Yu.N.; Zhdanov, G.S.; Roginskaya, Yu.Ye.; Fedulov, S.A.; Ivanova, V.V.; Chkalova, V.V.; Viskov, A.S.; Kapy*shev, A.G.; Bondarenko, V.S.; Lady*zhinskiy, P.B.

TITLE: Investigation of some solid solutions based on the ferroelectric-ferromagnet bismuth ferrite [Report, Symposium on Ferromagnetism and Ferroelectricity held in Leningrad 30 May to 5 June 1963].

SOURCE: AN SSSR. Izv. Ser.fiz., v.28, no.4, 1964, 683-690

TOPIC TAGS: ferromagnetism, ferroelectricity, bismuth ferrite, bismuth ferrite solid solution

ABSTRACT: By investigating solid solutions of $Bi_2O_3 \cdot Fe_2O_3$ in $PbTiO_3$, some of the authors, together with others, were able to show the existence of the compound $BiFeO_3$ with the perovskite structure and strong ferroelectric properties. This work is reviewed, and later investigations are reported of the electric and magnetic properties of solid solutions containing $BiFeO_3$. The solutions discussed are the two-component systems in which one component is $BiFeO_3$ and the other is $LaFeO_3$, $LaCrO_3$,

Card 1/3

ACCESSION NR: AP4030644

$PbTiO_3$, $BaTiO_3$, $PbZrO_3$, $LaAlO_3$, or $SrSnO_3$. Of these solutes, two are ferromagnetic, two are ferroelectric, one is antiferroelectric and two are perovskites with normal magnetic and electric properties. Phase diagrams are given for the $PbTiO_3$, $LaCrO_3$, and $BaTiO_3$ solutions. Curves of magnetization versus temperature are given for various compositions of the $LaCrO_3$ and $PbZrO_3$ solutions, and curves of dielectric constant versus temperature for the $LaAlO_3$, $PbZrO_3$ and $BaTiO_3$ solutions. The Neel point is plotted against composition for all the solutions except those containing $SrSnO_3$, which could not be obtained as a single phase. Extrapolation of the Curie points of the $LaAlO_3$ and $PbZrO_3$ solutions to zero concentration confirmed the high ferroelectric Curie point (about 850°C) of $BiFeO_3$. The weak ferromagnetic properties of $BiFeO_3$ persisted in solutions containing high concentrations of materials without peculiar magnetic properties. Particularly interesting is the concentration dependence of the spontaneous magnetization of the $LaCrO_3$ solutions; the magnetization increased discontinuously as the system crossed the boundary from the ferroelectric to the antiferroelectric state. The $LaFeO_3$ solutions are said to have behaved similarly, but as these solutions have been discussed in detail elsewhere (Yu.B.Roginskaya, Yu. N.Venevtsev, G.S.Zhdanov and S.A.Fedulov, Kristallografiya,8,1963), the data are not given. An anomaly in the Mossbauer spectrum of the $SrSnO_3$ solutions that was pro-

Card 2/3

ACCESSION NR: AP4030644

viously ascribed to a ferroelectric transition (Fam Zui Khiyen, A.S.Viskov, V.C. Shpinel' and Yu.N.Venevtsev, Zhur.eksp.i teor.fiz.,44,1963) is now believed to be due to antiferromagnetic ordering. Orig.art.has: 10 figures.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 30Apr64 ENCL: 00

SUB CODE: EM NR REF SOV: 016 OTHER: 006

Card 3/3

ACCESSION NR: AP4037617 S/0056/64/046/005/1921/1923

AUTHORS: Tomashpol'skiy, Yu. Ya.; Venevtsev, Yu. N.; Zhdanov, G. S.

TITLE: Concerning the connection between special dielectric and magnetic properties in "ferroelectric magnets"

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 5, 1964, 1921-1923

TOPIC TAGS: ferroelectricity, ferromagnetism, dipole moment, dielectric constant, specific magnetization, antiferromagnetism, atomic structure, electric structure, magnetic structure

ABSTRACT: To check on the presence of an internal connection between the electric and magnetic dipole structures of $BiFeO_3$, which is a new class of substance combining special dielectric and special magnetic properties ("ferroelectric magnets"). Comprehensive investigations were made of the temperature dependences of the unit-cell para-

Card 1/4

ACCESSION NR: AP4037617

meters, the dielectric constant, and the specific magnetization, with special care in the region of the antiferromagnetic transition. The details of the experiment are described. The noticeable anomalies in the curves of these parameters in the region of the Neel point offer evidence of the existence of a connection between the magnetic, electric, and atomic structures. It is precisely by virtue of this connection that the sharp change in the magnetic structure at the point of antiferromagnetic transition leads to noticeable changes in the electric and atomic structures, as reflected in the anomalies of the corresponding parameters near the Neel point. The observation of one of the manifestations of such an interaction in $BiFeO_3$ indicates that this connection is experimentally detectable and can be observed and investigated in a comprehensive fashion, by studying the changes in the magnetic and electric characteristics and of the parameters of the atomic lattice as functions of several extraneous factors (temperature, pressure, fields, etc.). The connection can be regarded both on a unit-cell scale, as well as on a scale

Card 2/4

ACCESSION NR: AP4037617

of multidomain formations in the case of single crystals or polycrystals. Orig. art. has: 1 figure.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Institute)

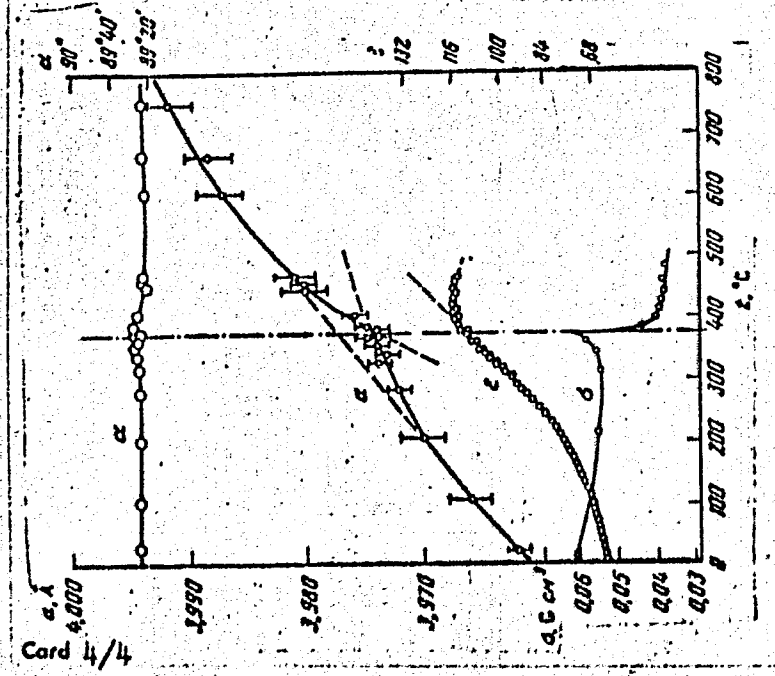
SUBMITTED: 04Mar64 DATE ACQ: 09Jun64 ENCL: 01

SUB CODE: SS NR REF SOV: 011 OTHER: 000

Card 3/4

ACCESSION NR: AP4037617

ENCLOSURE: 01



Temperature dependence of the parameters of the atomic, magnetic and electric structures for $BiFeO_3$: the period a and the rhombohedral angle α of the unit cell; the specific magnetization σ in a field H = 7800 Oe; and of the dielectric constant ε

Card 4/4

VENEVTSEV, Yu. N.; ZHDANOV, G. S.; ROGINSKAYA, Yu. Ye.; FEDULOV, S. A.; IVANOVA, V. V.; CHKALOVA, V. V.; VISKOV, A. S.; KAPYSHEV, A. G.; BONDARENKO, V. S.; LADYZHINSKIY, P. B.

Some solid solutions on the basis of the ferroelectric-antiferromagnetic $BiFeO_3$. Izv. AN SSSR. Ser. fiz. 28 no. 4: 683-690 Ap '64. (MIRA 17:5)

ZHDANOV, G.S.; VORONA, Yu.M.

Electron-microscopic study of crystalline modifications of copper phthalocyanin. Izv. AN SSSR. Ser. fiz. 27 no.9:1232-1234 S '63. (MIRA 16:9)

(Electron microscopy) (Phthalocyanins)

KURDYUMOV, A.V.; DEMIN, Yu.V.; ZHDANOV, G.S.

Effect of technological factors on the mechanical properties and tendency toward crack formation of the ML5 alloy. Lit. proizv. no.8:17-18 Ag '63. (MIRA 16:10)

VORONTSOVA, L.G.; ZVONKOVA, Z.V.; ZHDANOV, G.S.

Model of the structure of 3.3'-diethylthiocarbocyanine chloride as determined by the statistical method. Kristallografiia 8 no.3:374-377 My-Je '63. (MIRA 16:11)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova.

KUZ'MIN, R.N.; ZHURAVLEV, N.N.; ZHDANOV, G.S.

Thermal analysis of the Rh - Bi system. Zhur. neorg. khim. 8 no.8:1906-1914 Ag '63. (MIRA 16:8)

1. Moskovskiy gosudarstvennyy universitet, fizicheskiy fakul'tet, kafedra fiziki tverdogo tela.

(Rhodium-bismuth alloys)
(Thermal analysis)

ZHDANOV, G. S.

"Investigation of some solid solutions based on the ferroelectric-antiferromagnetic FiFeO."

report presented at the Symposium on Phase Transitions in Solids, 6th General Assembly, Intl. Union of Crystallography, Rome, Italy, 16-18 Sep 1963.

(Karpov Institute of Physical Chemistry, Moscow, USSR)

ZHDANOV, G. S.

"The Calculations of the internal electric fields and electric-field gradients in the perovskite-type compounds with special dielectric properties."

report presented at the Symposium on Phase Transitions in Solids, 6th General Assembly, Intl. Union of Crystallography, Rome, Italy, 16-18 Sep 1963.

(Karpov Institute of Physical Chemistry, Moscow, USSR)

DOROSINSKIY, A.L.; KOLNINOV, O.V.; ZVONKOVA, Z.V.; ZHDANOV, G.S.

X-ray and spectral studies of the complex compounds of cuprous thiocyanate with thiourea and pyridine. Dokl. AN SSSR 150 no.6:1278-1279 Je '63. (MIRA 16:8)

1. Fiziko-khimicheskiy institut im. L.Ya. Karpova. Predstavleno akademikom S.S.Medvedevym.
(Copper compounds--Spectra) (Thiocyanates) (Urea)

OZEROV, R.P.; FYKIN, L.Ye.; RANNEV, N.V.; ZHDANOV, G.S.

Neutron diffraction study for the localization of hydrogen atoms in the structure of lithium sulfate monohydrate $Li_2SO_4 \cdot H_2O$. Dokl. AN SSSR 148 no.5:1069-1072 F '63. (MIRA 16:3)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. Predstavleno akademikom N.V.Belovym.
(Neutron diffraction crystallography) (Lithium sulfate) (Hydrogen)

L 17743 EWP(j)/EWT(m)/BDS AFFTC/ASD

ACCESSION NR: AP3004108

AUTHOR: Kuz'min, B. N.; Zhurav[illegible]

TITLE: Thermal analysis of [illegible]

SOURCE: Zhurnal neorganicheskoy khimii, v. 8, no. 8, 1963, 1906-1914

TOPIC TAGS: DTA, Rh, Bi, differential thermal analysis, rhodium, bismuth

ABSTRACT: Differential thermal analysis has been [illegible] for the first time in Rh-Bi equilibrium systems. An equilibrium diagram has been constructed for the above system, starting with pure Bi and ending with a 22.5 weight % of Rh in the system. Rh-Bi thermograms were taken after the alloy had been [illegible] geneously heated for 48 hours at 72[illegible]. The only effects shown in the heating curves are the ones corresponding to the eutectic transformation, reaction of $RhBi_2$ formation, and the [illegible] transformation $\alpha \rightleftharpoons \beta$-$RhBi_2$. The differential effect corresponding to the eutectic transformation disappears completely when the

Card 1/2

ACCESSION NR: AP3004345

Rh content is 10.5 weight %. At [illegible] weight % of Rh, the polymorphic effect of transformation of β-$RhBi_2$ is noted. This effect increases with an increase of Rh content. Authors concluded that a $RhBi_2$ compound exists. Orig. art. has: [illegible] figures and [illegible] tables.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet, Fizicheskiy fakultet, Kafedra fiziki tverdogo tela [Moscow State University, Physics Department, Department of Solid State Physics]

SUBMITTED: 26Jun62 DATE ACQ: 21Aug63 ENCL: 00

SUB CODE: CH, EL NO REF SOV: 022 OTHER: 001

Card 2/2

VENEVTSEV, Yu. N., LYUBIMOV, V. N., SOLOV'YEV, S. P., Viskov, A. S. and ZHDANOV, G.

"Calculation of Internal Electric Fields and Field Gradients in Perovskite Type Compounds with Special Dielectric Properties."

report presented at the Symposium on Ferroelectricity and Ferromagnetism, Leningrad, 30 May - 5 June 1963.

L 14282-63

ACCESSION NR: AP3001008

AUTHOR: Roginskaya, Yu. Ye.; Venevtsev, [illegible]

[illegible]

SOURCE: Kristallografiya, v. 8, no. [illegible]

TOPIC TAGS: ferromagnet, antiferromagnet, weak ferromagnet, ferroelectric, antiferroelectric, bismuth orthoferrite, [illegible]

ABSTRACT: The $Bi_2Fe_2O_6$-$LaFeO_3$ system [illegible]

Card 1/3

L 14282-63
ACCESSION NR: AP3004094

parameters were determined by a method previously described [illegible] laboratoriya, [illegible] The [illegible] solid solution over the [illegible] solid solution [illegible] pseudomonoclinic [illegible] sharp discontinuity in the parameters [illegible] cations, together with a decrease in [illegible] MPP-300 bridge, and the temperature [illegible]

Card 2/3

L [illegible]
ACCESSION NR: AP[illegible]

voltmeter. The maximum conductivity was [illegible] of $LaFeO_3$. One of the two breaks on each of the [illegible] temperature coincided with the Neel temperature T_N. [illegible] temperature, together with the x-ray data, [illegible] properties of samples in the [illegible] than 45% $LaFeO_3$ increases continuously [illegible] concluded that the rhombohedral modification [illegible] ferroelectric because of the presence [illegible] rhombohedral region of the $BiFeO_3$-$LaFeO_3$ [illegible] absent in that region in the system studied. [illegible] shown in Fig. 1, was established on the basis [illegible] line represents the ferroelectric Curie point [illegible] temperature. Two regions of the diagram are of particular interest, [illegible] up to 18.8 mol% $LaFeO_3$, which combine ferroelectricity with weak ferromagnetic properties, and that of compositions in the [illegible] are antiferroelectric with weak ferromagnetic properties. Coincidence of the transition between the two regions with the discontinuity of U_0 is considered proof of a definite interconnection between the special electrical and magnetic properties

Card 3/3

L 14282-63
ACCESSION NR: AP3[illegible]

of a given solid solution. Both properties are dependent [illegible] the [illegible] solid solution. The [illegible]

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im. L. Ya. Karpova (Scientific Research Physicochemical Institute)

SUBMITTED: 29Jan63 DATE ACQ: 15Aug63 ENCL: 01

SUB CODE: PH NO REF SOV: 018 OTHER: 007

Card 4/54

ZHURAVLEV, N.N.; ZHDANOV, G.S.; SMIRNOVA, Ye.M.

Investigating bismuth-platinum alloys in the range of 10 to 50 atomic percent of platinum. Fiz. met. i metalloved. 13 no.4: 536-545 Ap '62. (MIRA 16:5)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Bismuth-platinum alloys—Metallography)
(Phase rule and equilibrium)

KHEYKER, Daniel' Moiseyevich; ZEVIN, Lev Saulovich; ZHDANOV, G.S., prof., red.; DUBNOVA, V.Ya., red.; PLAKSHE, L.Yu., tekhn.red.

[X-ray diffractometry] Rentgenovskaia difraktometriia. Pod red. G.S.Zhdanova. Moskva, Fizmatgiz, 1963. 380 p. (MIRA 16:5)

(X rays--Diffraction)

ROGINSKAYA, Yu.Ye.; VENEVTSEV, Yu.N.; ZHDANOV, G.S.

Coexistence of antiferromagnetic and characteristic dielectric properties in the system $BiFeO_3$ - $LaFeO_3$. Zhur. eksp. i teor. fiz. 44 no.4:1418-1420 Ap '63. (MIRA 16:4)

1. Fiziko-khimicheskiy institut imeni L.Ya.Karpova.
(Bismuth ferrates—Magnetic properties)
(Lanthanum ferrates—Magnetic properties)

SOKLAKOV, A.I.; ZHDANOV, G.S.

X-ray diffraction study of radial distributionsin amorphous solid solutions in the system sulfur - P_4S_{10}. Kristallografiia 7 no.6:882-885 N-D '62. (MIRA 16:4)

1. Nauchnyy institut udobreniy i insektofungisidov imeni Ya.V.Samoylova i Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(X-ray diffraction examination) (Systems (Chemistry))

ZHDANOV, G.S.; VLASENKO, V.I.

Computing methods in roentgenography, and the "Kristall" electronic calculating machine. Probl.fiz.khim. no.1:129-138 '58. (MIRA 15:11)

1. Rentgenovskaya laboratoriya Nauchno-issledovatel'skogo fiziko-khimicheskogo instituta im. Karpova.
(X rays--Diffraction)
(Electronic calculating machines)

AUTHOR: Rozinskaya, [illegible]

TITLE: The coexistence of [illegible] properties in the system $BiFeO_3$-[illegible]

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1964, no. 4, 1961, [illegible]

TEXT: The system $BiFeO_3$-$LaFeO_3$ [illegible] pseudo-monoclinic II [illegible] magnetic measurements were made [illegible] to 8 koe and in the temperature [illegible] 15, and 17.5% $LaFeO_3$ and all [illegible]

Card 1/2

S/[illegible]/63/[illegible]/044

The coexistence of antiferromagn[illegible]

spontaneous magnetization and [illegible] with
weak ferromagnetism. [illegible]
magnetization increases in [illegible]

linearly. The [illegible]

[illegible]

[illegible]

in the Journal "Kristallografiya". [illegible]

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute [illegible])

SUBMITTED: January 29, 1963

Card 2/2

DUDAREV, V.Ya.; ZHDANOV, G.S.; ALEKSEYEV, B.A.

X-ray diffraction study of precipitates produced by bombarding metals with ions of other metals. Atom. energ. 13 no.4:382-383 O '62. (MIRA 15:9)

(Metal ions) (X rays—Diffraction)

[illegible] 2/

E 2/E 2

AUTHORS: Chetkina L.A., [illegible] 5.

[illegible] Crystal structure [illegible]

PERIODICAL: Kristallografiya, v.[illegible] no.2, [illegible]

TEXT: Single crystals of 1,5-dibromanthraquinone $[(C_7H_3O)_2Br_2]$ in the form of long dark-yellow needles were obtained by slow evaporation from a solution in pyridine and also by sublimation in a normal atmosphere. The parameters of the monoclinic unit cell were found by X-ray measurements to be $a = 11.24 \pm 0.02$, $b = 13.43 \pm 0.03$, $c = 3.93 \pm$ [illegible] Å, $\beta = 91°23' \pm 12'$, $V = 598$ Å^3. The density was calculated from the data to be 2.03 g/cm^3 which is close to the value obtained from pyknometric measurements (2.02). The number of molecules in the unit cell is two, and the space group is $C_{2h}^5 - P2_1/a$. The deviation of the bromine and oxygen atoms on different sides of the plane of the anthraquinone ring was found to be [illegible].158 and -0.130 Å respectively. The [illegible]

Card 1/2

Crystal structure of ... S/07[illegible]

C - Br and C - O were 2.00 and [illegible] Å respectively.
There are 5 figures and 3 tables.

ASSOCIATION: Fiziko-khimicheskiy institut im. [illegible]
(Physicochemical Institute imeni [illegible])

SUBMITTED: June 27, 1962

Card [illegible]

S/070/63/008/002/003/017
E039/E435

AUTHOR: Zhdanov, G.S., Zubov, [illegible] G., Kolontsova, [illegible] V., Osipova, L.P., Telegina, [illegible]

TITLE: Radiation effects in α-quartz

PERIODICAL: Kristallografiya, v.8, no.2, 1963, 207-212

TEXT: A comparison of the Raman spectra of α-quartz before and after exposure to neutrons is carried out. The structural characteristics are obtained by [illegible] scattering method. The [illegible] spectrum [illegible] the spectrum is continuous [illegible] of blurred wide maxima [illegible] the scattering is very similar [illegible]

Card 1/2

[illegible]

[illegible] quartz. 4) the intensity of [illegible] depends on the orientation of [illegible] that the third order [illegible]

[illegible] the structure [illegible] following manner: 1 Initially [illegible] splitting and breaking of the [illegible]

There are 4 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy [illegible] M.V.Lomonosov)

SUBMITTED: July 10, 1962

Card 2/2

VERTSNER, V.N.; VORONA, Yu.M.; ZHDANOV, G.S.

Observation of crystal lattices in a EM-5 electron microscope. Opt. i spektr. 13 no.4:605-607 O '62. (MIRA 16:3)

(Electron microscopy) (Crystal lattices)

L 36337-66 EWT(m)/EWP(e) WH

ACC NR: AP6015778 (A,N) SOURCE CODE: UR/0048/66/030/005/0835/0839

AUTHOR: Zhdanov, Gl. S.; Vertsner, V. N.

ORG: none

45
44
B

TITLE: Electron microscope observation of the formation and growth of ice crystals /Report, Fifth All-Union Conference on Electron Microscopy held in Sumy 6-8 July 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 5, 1966, 835-839

TOPIC TAGS: electron microscopy, crystal growth, ice, water, electric field

ABSTRACT: The growth of ice crystals on cold thin carbon and quartz films was observed with an electron microscope. The ice crystals formed by condensation of residual water vapor which was present in the microscope chamber at pressures ranging from 10^{-5} to 10^{-3} mm Hg. The accelerating potential was 80 kV, the electron beam diameter was 5-10 microns, and the current density in the beam was 0.01 A/cm^2. Under these conditions heating of the substrate by the electron beam was negligible. Hexagonal, cubic, and amorphous forms of ice were observed. The hexagonal form was stable over a wide range of temperatures; the cubic form could be obtained free from hexagonal admixture only at high vacuum and temperatures below 145° K. A sharp change in the character of the crystallization took place at 170° K; instead of the formation of large crystals, there was observed the almost simultaneous appearance of a large number of nuclei which

Card 1/2

L 36337-66

ACC NR: AP6015778

grew preferentially in the plane of the substrate. On the quartz substrates there were observed filamentary ice structures, which grew rapidly toward the irradiated portion of the film. These structures are ascribed to the action of electric fields due to charging of the quartz substrate by the electron beam. From a comparison of the present observations with those of J.T.Bartlett, A.P.van den Heuval, and B.J. Mason (Z. angew. Math. und Phys., 14, 599 (1963)), it is concluded that the electric field strength exceeded 500 V/cm. The polycrystalline nature of the filamentary structures was clearly evinced on the electron micrographs. The authors thank L.V. Degtova for assistance in preparing the substrates. Orig. art. has: 5 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 002/ OTH REF: 007

Card 2/2

ACC NR: AT6014763 GD/JD SOURCE CODE: UR/0000/65/000/000/0123/0129

AUTHORS: Zhdanov, G. S.; Ibraimov, N. S.; Kuz'min, R. N.

ORG: none

84
81
B+1

TITLE: Application of the Mössbauer effect to the investigation of superconducting alloys

SOURCE: Soveshchaniye po metallovedeniyu i metallofizike sverkhprovodnikov. 1st, 1964. Metallovedeniye i metallofizika sverkhprovodnikov (Metallography and physics of metals in superconductors); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1965, 123-129

TOPIC TAGS: superconducting alloy, Mössbauer effect, chemical bonding, tin, isomorphism, hyperfine structure

ABSTRACT: A survey is made of the various applications of the Mössbauer effect to the study of superconducting alloys. The method of determining the type of chemical bond is discussed by using the isomorphic shift of Mössbauer lines, or

$$\delta = E_a - E_e \sim A\,[R_u - R_0]\,[|\Psi_a(0)|^2 - |\Psi_e(0)|^2].$$

For white tin the $|\Psi_{5s}(0)|^2$ versus δ curve is used to obtain the effective number of s-electrons, quantitatively. Then, utilizing the fact that superconductivity is connected with phonon-electron interactions in a crystal, the Mössbauer effect is used to determine f where

$$f(0, T) = \exp - \left(\frac{E_0^2}{2Mc^2} \cdot \frac{3}{2k\theta}\right).$$

Card 1/2

L 38541-66

ACC NR: AT6014763

3

If f is determined experimentally for a metal in both normal and superconducting states, the Debye temperatures before and after transition can be directly compared. This, however, is shown to be a very sensitive experiment and is very difficult to perform. Finally, the possibility is investigated for using the Mössbauer effect to serve as a low-temperature thermometer. This could be done by observing the splitting of the ^{57}Fe ground level into two sublevels for which a unique temperature can be determined. Once more, it is stressed that because of small magnetic moments the phenomenon of splitting is small and the experiment very sensitive to noise. Orig. art. has: 6 figures and 3 formulas.

SUB CODE: 20, 11/ SUBM DATE: 23Dec65/ ORIG REF: 003/ OTH REF: 012

Card 2/2

L 2374-66

ACCESSION NR: AP5020826 UR/0020/65/163/004/0865/0867

AUTHORS: Zhdanov, Gl. S.; Vertsner, V. N.

TITLE: The use of zeolites for decreasing hydrocarbon accumulation in electron microscopes

SOURCE: AN SSSR. Doklady, v. 163, no. 4, 1965, 865-867

TOPIC TAGS: zeolite, electron microscope, hydrocarbon, contamination

ABSTRACT: Present measures for prevention of contamination in electron microscopes are deficient chiefly because of the difficulty of introducing the cooled protective diaphragm into such a narrow space--the restricted zone of the upper pole piece of the objective lens. The authors suggest a method of decreasing the partial hydrocarbon pressure in the electron microscope by means of zeolites. The zeolites were chosen because of their great adsorbent properties at low pressures, their high mechanical strength, and the simplicity of their regeneration. Zeolite granules were introduced directly into the tube of the instrument or in a glass extension attached to the tube. Even without cooling, this arrangement proved very effective. Zeolite granules with pore spaces of 10 Å and specific surface of 1000 m^2/g were used. The rate of hydrocarbon accumulation was observed at a

Card 1/2

L 2374-66

ACCESSION NR: AP5020826

current density of 0.2-0.5 amp/cm^2 and a beam density of 3-4 μ. The initial rate of growth was 2 Å/sec. Several days after adding the attachment with zeolites, the rate had declined to 0.25-0.2 Å/sec. Introduction of zeolite in a ring directly around the specimen caused the rate of growth to decline to 0.08-0.04 Å/sec. When the beam was especially intense, the organic film could be removed entirely. It was found that zeolites give practically the same results as a cooled chamber, and the technique eliminates the existing difficulties of manipulation as well as the necessity of using liquid nitrogen. Zeolites may also be used for devices other than the electron microscope when such problems of contamination are encountered. "The authors express their thanks to S. P. Zhdanov for fruitful consultations during the work." Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 25Dec64 ENCL: 00 SUB CODE: OP, EC

NO REF SOV: 001 OTHER: 006

Card2/2

L 4263-66 EWP(e)/EPA(s)-2/EWT(m)/EWP(i)/EPA(w)-2/EWP(t)/EWP(b) IJP(c) WW/JD

ACC NR: AP5024548 UR/0070/65/010/005/0644/0649

548.736:537.226

47

47

7 B

AUTHOR: Viskov, A. S.; Venevstev, Yu. N.; Zhdanov, G. S.

TITLE: Study of the structure and magnetic and electric properties of solid solutions in the system $BiFeO_3$ - "$Sr(Sn_{1/3}Mn_{2/3})O_3$"

SOURCE: Kristallografiya, v. 10, no. 5, 1965, 644-649

TOPIC TAGS: solid solution, Neel temperature, Curie point, antiferromagnetic material, spontaneous magnetization, bismuth compound, iron compound, strontium compound, tin compound, manganese compound

ABSTRACT: The samples were prepared by the usual ceramic process from Bi_2O_3, SnO_2, $SrCO_3$, Fe_2O_3, and MnO_2 (firing at 75 — 1100C at 4 — 6 hr and again at 820 — 1600C for 1 — 2 hr). After each firing, the phase composition of the samples was checked by x-ray diffraction. The latter showed that the system $BiFeO_3$ - $Sr(Sn_{1/3}Mn_{2/3})O_3$ contains a broad single-phase region of solid solutions based on [illegible] $Sr(Sn_{1/3}Mn_{2/3})O_3$." Analysis of the splitting of the principal [illegible] showed that the solid solutions in this system cell parameters at room temperature exist in four modifications: rhombohedral, cubic, pseudocubic I and pseudocubic II. The Neel temperatures T_N of the various samples were determined from the temperature dependence of spontaneous magnetization. Below T_N, the solid solutions are antiferromagnetics with a weak ferromagnetism. It was found that in the system studied there is a wide region of

Card 1/2

L 4263-66

ACC NR: AP5024548

solid solutions in which a magnetic and an electric dipole structure exist over a wide temperature range. No distinct correlation was noted between these structures, and no special effort is made to elucidate it. "We thank Yu. Ye. Roginskiy for valuable suggestions and comments." Orig. art. has: 4 figures.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Institute)

SUBMITTED: 26Jun64 ENCL: 00 SUB CODE: SS, GM

NO REF SOV: 010 OTHER: 003

Card 2/2

ROGINSKAYA, Yu.Ye.; VENEVTSEV, Yu.N.; ZHDANOV, G.S.

Structure and magnetic properties of ferroelectric solid solutions in the system Pb_2CoWO_6 -- $CdMnO_3$. Izv. AN SSSR. Ser. fiz. 29 no.6: 1022-1025 Je '65. (MIRA 18:6)

VISKOV, A.S.; VENEVTSEV, Yu.N.; ZHDANOV, G.S.

New ferroelectric substances with the structure of perovskite and pyrochlore. Dokl. AN SSSR 162 no.2:323-325 My '65. (MIRA 18:5)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. Submitted December 2, 1964.

SPEKTOROVA, S.I., inzh.; ZHDANOV, G.S., inzh.

Electric resistance of aluminum-silicon alloys. Lit. proizv. no.9: 30-31 S '65. (MIRA 18:10)

L 13130-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/JG

ACC NR: AP6000189 SOURCE CODE: UR/0056/65/049/005/1389/1393

49

B

AUTHOR: Ibraimov, N. S.; Kuz'min, R. N.; Zhdanov, G. S.

ORG: Moscow State University (Moskovskiy gosudarstvennyy universitet)

TITLE: The Mossbauer effect in compounds of the fluorite type ($IrSn_2$ and $PtSn_2$)

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 5, 1965, 1389-1393

TOPIC TAGS: Mossbauer effect, platinum compound, iridium compound, temperature dependence, resonance absorption, Gamma ray absorption, absorption probability

ABSTRACT: This is a continuation of earlier work by one of the authors (Kuz'min, with V. A. Bryukhanov and N. N. Delyagin, ZhETF v. 46, 137, 1964) on the Mossbauer line and its shape. The purpose of the present investigation was to study, for a given type of crystal lattice, the effect of changing the surroundings of the Mossbauer atom, the mass of the atom, and the structure of the d-band. The $IrSn_2$ and $PtSn_2$ compounds were obtained by melting the components in quartz ampoules and subsequent annealing. The absorbers were prepared by pressing powders of the compounds in mixture with beryllium oxide. The resonance absorption of 23.8-kev γ quanta by Sn^{119} nuclei was investigated in the temperature range from 77 to 600K.

Card 1/2

L 13130-66

ACC NR: AP6000189

The results showed a decrease in the resonance absorption with increasing temperature, similar to that previously observed for Mg_2Sn. The probabilities for recoilless resonance absorption of the γ quanta and the widths of the absorption lines were determined for both compounds (Table). The results are interpreted on the basis of data concerning the structure and the nature of the chemical bond in these compounds. Tests were also made with $IrSn_2$-$PtSn_2$ alloys with 25, 50, and 70 mol.% $PtSn_2$. All three alloys gave single Mossbauer lines. Orig. art. has: 2 figures and 1 table.

Absorption probability (f') and width of resonant line (Γ), extrapolated to zero thickness

Compound	f'		Γ_{exp}, mm/sec	δ, mm/sec
	77° K	297° K		
$IrSn_2$	0.73±0.05	0.39±0.03	0.82±0.02	−0.05±0.02
$PtSn_2$	0.76±0.05	0.43±0.03	0.76±0.02	+0.35±0.02
Mg_2Sn	0.77±0.08	0.28±0.03	0.68±0.01	0.00

SUB CODE: 20/ SUBM DATE: 25May65/ ORIG REF: 003/ OTH REF: 004

Card 2/2 HW

L 12096-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACC NR: AP6000531 SOURCE CODE: UR/0070/65/010/006/0862/0868

AUTHOR: Viskov, A.S.; Venevtsev, Yu.N.; Zhdanov, G.S.; Onikiyenko, L.D.

ORG: Physics-Chemistry Institute im. L. Ya. Karpov (Fiziko-khimicheskiy institut)

TITLE: The study of new lead-containing perovskites

SOURCE: Kristallografiya, v. 10, no. 6, 1965, 862-868

TOPIC TAGS: perovskite mineral, x-ray diffraction analysis, ferroelectric material, antiferroelectricity, mineralogy, mineral, inorganic chemistry

ABSTRACT: The authors reported earlier (Dokl. AN SSSR, 158, 1, 86, 1964) on the synthesis of a large number of new lead-containing perovskites. The present article describes the production conditions, methods for x-ray and dielectric studies, and the results of such studies carried out on samples with a starting composition of $Pb(Li_{1/3}^{1+}B_{1/3}^{5+}W_{1/3}^{6+})O_3$, $Pb(Li_{1/4}^{1+}B_{1/4}^{3+}W_{1/2}^{6+})O_3$, where B^{3+} = Fe, La; $Pb(B_{1/4}^{2+}Mn_{1/4}^{4+}B_{1/2}^{5+})O_3$, where B^{2+} = Co, Ni, Zn, Mg, and Cd, B^{5+} = Mb, Ta, and W. In addition, magnetic measurements were carried out in the -170 to 350 - 400C temperature range for samples with compositions $Pb(B_{1/4}^{2+}Mn_{1/4}^{4+}Nb_{1/2}^{5+})O_3$, where B^{2+} = Co and Ni, and $Pb(B_{1/4}^{2+}Mn_{1/4}^{4+}W_{1/2}^{5+})O_3$

Card 1/2 UDC: 548.736:537.226.1

L 12090-66

ACC NR: AP6000531

where B^{2+} = Co, Ni, and Mg. All synthesized samples had the perovskite-type structure and exhibited either ferroelectric or antiferroelectric dielectric properties. Some of them, such as $Pb(B_{1/4}^{2+}Mn_{1/4}^{4+}Nb_{1/2}^{5+})O_3$ with B^{2+} = Co and Ni, and $Pb(Ni_{1/4}^{2+}Mn_{1/4}^{4+}Ta_{1/2}^{5+})O_3$ exhibit, in addition, ferromagnetic properties. The authors thank Yu. Ye. Roginskaya for valuable advice during the discussion of magnetic properties. Orig. art. has: 2 figures and 1 table.

SUB CODE: 07, 11 / SUBM DATE: 16Oct64 / ORIG REF: 007 / OTH REF: 001

Card 2/2

L 07113-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD/HW/GG

ACC NR: AP6029107 SOURCE CODE: UR/0048/66/030/006/0957/0961

AUTHOR: Zhdanov, G. S.; Ibraimov, N. S.; Kuz'min, R. N.; Chechernikov, V. I.

ORG: Physics Department, Moscow State University im. M. V. Lomonosov (Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: The Mossbauer effect in the intermetallic compounds $Co_{1.4}Sn$ and $Ni_{1.4}Sn$ [Report All-Union Conference on the Physics of Ferro-and Antiferromagnetism held 2-7 July 1965 in Sverdlovsk]

SOURCE: AN SSSR, Izvestiya. Seriya fizicheskaya, v. 30, no. 6, 1966, 957-961

TOPIC TAGS: Mossbauer spectrum, Mossbauer effect, magnetic susceptibility, cobalt alloy, nickel alloy, intermetallic compound

ABSTRACT: The present study was undertaken in conjunction with the growing interest in nuclear resonance absorption in intermetallic compounds, in particular those containing ferromagnetic elements. Specifically, there was studied the Mossbauer effect in $Co_{1.4}Sn$ and $Ni_{1.4}Sn$. The compound specimens were prepared by vacuum melting of the components, followed by homogenizing anneal in sealed tubes (50 hours at about 800°C) and then slow cooling to room temperature. In the same manner there were prepared specimens of mixtures of the two above-mentioned compounds, i.e., representatives of the Co-Ni-Sn system. Among the last only samples with the NiAs structure were selected for the Mossbauer measurements. The Mossbauer effect was studied on the Sn^{119} nuclei

Card 1/2

L 07113-67

ACC NR: AP6029107

in specimens with a "tin" thickness of 9 mg/cm^2. The source of the 23.8 keV gamma rays was a 5 mg/cm^2 thick sample of Mg_2Sn. The measurements were performed with the source at liquid nitrogen temperature. The Mossbauer spectra obtained for $Co_{1.4}Sn$ at different temperatures of the absorber and for a series of $Co_{1.4}Sn$-$Ni_{1.4}Sn$ solid solutions (0,9,25,50 and 100% $Co_{1.4}Sn$) are reproduced in figures. Also presented in graphics are the temperature dependences of the reciprocal susceptibility as obtained by the authors and taken from the literature (M.Asanuma, J.Phys.Japan, 17, 300, 1962); the agreement for $Co_{1.4}Sn$ is better than for $Ni_{1.4}Sn$. The temperature variation of the Mossbauer spectra shows that quadrupole splitting persists up to the temperature of the phase transition, that is, up to the temperature of the break in the reciprocal susceptibility versus temperature curve; above the transition point there is observed only the singlet Mossbauer line. The results are discussed briefly and reasons are hypothesized for the absence of ferromagnetism in the studied intermetallic compounds. Further investigations must be made before a full interpretation of the present results can be offered. Orig. art. has: 4 figures.

SUB CODE: 20,07 SUBM DATE: 00 ORIG. REF: 005 OTH REF: 004

Card 2/2

L 09459-67 EWT(1)/EWP(t)/ETI IJP(c) JD
ACC NR: AP6024664 SOURCE CODE: UR/0070/66/011/004/0511/0519

AUTHOR: Kuz'min, R. N.; Kolpakov, A. V.; Zhdanov, G. S.

ORIG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Scattering of Mossbauer radiation by crystals

SOURCE: Kristallografiya, v. 11, no. 4, 1966, 511-519

TOPIC TAGS: Mossbauer effect, gamma scattering, atomic structure, crystal structure analysis

ABSTRACT: The authors present a theoretical analysis of the application of the Mossbauer effect, and especially resonant scattering of quanta by nuclei of atoms in a crystal, to the investigation of the atomic structure of crystals. The theory of the method is reviewed and it is shown how measurement of a sufficiently large number of reflections makes it possible to establish the crystallographic planes which contain Mossbauer atoms. The experimental data which can serve as a basis of structural analysis by the Mossbauer-atom method are reviewed. It is shown that the Mossbauer method combines the advantages of other structure-analysis methods and in addition has a greater flexibility. It also permits an analysis of complicated

Card 1/2 UDC: 548.7

L 09459-67
ACC NR: AP6024664

biological crystalline objects. Although there are still many experimental difficulties, it is concluded that there are grounds for assuming Mossbauer scattering and diffraction to take their place among other diffraction methods of structural analysis. Orig. art. has: 4 figures and 18 formulas.

SUB CODE: 20/ SUBM DATE: 14Sep65/ ORIG REF: 001/ OTH REF: 015

Card 2/2

ZHDANOV, G.T.; DENISOV, P.V.; LU CHAO-TSZYAN [Lu Ch'ao-chiang]

Exchange of experience. Zav.lab. 28 no.3:380 '62. (MIRA 15:4)

1. Vsesoyuznyy alyuminiyevo-magniyevyy institut (for Zhdanov).
2. Moskovskiy stankostroitel'nyy institut (for Denisov, Lu Chao-TSyan).

(Proportioning equipment)

ZHDANOV, I., kapitan

In the soldiers' tearoom of a distant garrison. Tyl i snab. Sov. Voor. Sil 21 no.11:44-45 N '61. (MIRA 15:1)
(Soldiers—Recreation centers)

SOMINSKIY, G.; ZHDANOV, I.

Technical standardization and public control. Sots.trud 4 no.11: 127-130 N '59. (MIRA 13:4)

1. Rukovoditel' gruppy normativno-issledovatel'skoy laboratorii pervoural'skogo Novotrubnogo zavoda (for Sominskiy) 2. Predsedatel' komissii zarabotnoy platy zavkoma profsoyuza pervoural'skogo Novotrubnogo zavoda (for Zhdanov).
(Rolling mills--Production standards)

ZHDANOV, —

USSR/Cultivated Plants - Grains. L-2

Abs Jour : Ref Zhur - Biologiya, No 16, 25 Aug 1957, 69216

Author : ~~Zhdanov, I.~~
Inst :
Title : Effect of Timing Sowings, and Norm for Oat Yield in Kulundin Steppe.

Orig Pub : S. kh. Sibiri, 1956, No 6, 41-45

Abstract : In field experiments of the Slavgorodsky specimen section of Altai region (1941-1949) and according to data of other experimental institutions in the steppe districts of Western Siberia and Northern Kazakhstan, it was established that the sowing of oats in the third 10-day period of May increases the yield on the average from 14.5 to 17.7 centners/hectare, shortens the vegetative period, and increases the absolute weight of grain. The best norm for sowings is 3 million germinating seeds per hectare.

Card 1/1

ZHDANOV, I.

Our workday has been shortened. Sov.profsoiuzy 6 no.8:46-48 Jl '58. (MIRA 11:9)

1.Predsedatel' komissii zarabotnoy platy komiteta profsoyuza Pervoural'skogo novotrubnogo zavoda.
(Pervoural'sk--Hours of labor)

ZHDANOV, I.

Public control over the operation of the wage system. Sots.trud no.8:73-76 Ag '56. (MLRA 9:10)

1. Predsedatel' komissii zarabotnoy platy zavkoma Pervoural'skogo Novotrubnogo zavoda.

(Metal industries--Production standards)
(Wages)

ZHDANOV, I. A.

USSR / Cultivated Plants. Cereals. M

Abs Jour : Ref Zhur - Biol., No 8, No 34640

Author : Zhdanov, I. A.
Inst : Not given
Title : A Proposal for the Revision of Technical Agronomy Methods and the Variety Zoning of Oats in the Steppe of Kulundinsk.

Orig Pub : Zemledeliye, 1957, No 2, 18-22.

Abstract : In the rayons of Kulundinskiy steppe, the yield of oats could be considerably increased by the following measures: sowing towards the end of May; replacement of the rayoned seed variety Pobeda by seeds of the variety Omskiy 6922 which are less glumaceous by some 4 to 5% and have a vegetative period shorter by 3 to 5 days than the variety Pobeda; sowing norm: 3 million seeds per hectare.--Yu. A. Pashkovskiy.

Card 1/1

34

SOKOLOV, L.D.; CHELYSHEV, N.A.; ZHDANOV, I.A.; KAZANTSEV, A.A.

Investigating the wear resistance of bearing textolite in conditions of work on rolling mills. Izv. vys. ucheb. zav.; chern. met. no.2: 172-177 '61. (MIRA 14:11)

1. Sibirskiy metallurgicheskiy institut.
(Bearings (Machinery)) (Rolling mills)

ZHDANOV, L.A., akademik

Brief results, methods, and tasks of sunflower breeding.
Agrobiologiia no.6:812-823 N-D '65. (MIRA 18:12)

1. Donskaya opytnaya stantsiya Vsesoyuznogo nauchno-issledovatel'skogo instituta masliichnykh kul'tur, Rostov-na-Donu, Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina.

SOV/112-58-1-500

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1958, Nr 1, pp 73-74 (USSR)

AUTHOR: Zhdanov, I. A., and Zhmarev, G. S.

TITLE: New Porcelain Low-Voltage Grain Filler Fuse Cutouts (Novyye farforovyye nizkovol'tnyye nasypnyye predokhraniteli)

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ABSTRACT: A description, a picture, and a mounting sketch with dimensions are presented of a new line of low-voltage porcelain grain-filler fuse cutouts, PN2 series, manufactured by Kursk Factory of Low-Voltage Equipment for rated currents of 100, 250, 400, and 600 amp. The new fuse cutouts are intended for AC standard-frequency installations up to 500 v, and differ from the older PNR line of the same factory in their smaller size, in procelain-tube construction, contact blades, and fusible links, and also in their higher interrupting rating. The new cutout weighs 27.6-41.8% less than the older type, depending on the current rating. Also, it requires less steel and copper than the

Card 1/2

SOV/112-58-1-500

New Porcelain Low-Voltage Grain-Filler Fuse Cutouts

older one. Unlike conventional round cross-section porcelain tubes, the new cutout has a square cross-section tube. Under test conditions, the new cutouts repeatedly interrupted 3-phase currents of 300-27,000 amp rms at 440 v, at power factor 0.12-0.2. The new cutout has a detachable handle for replacing fuse units.

R.S.D.

AVAILABLE: Library of Congress

1. Fuses (Electrical)--Performance 2. Electric relays--Design
3. Electric relays--Test results

Card 2/2

ZHDANOV, I. I.

Portable lapping machine. Mashinostroitel' no.10:17 O '62.
(MIRA 15:10)

(Grinding machines)

ZHDANOV, I.L.

[redacted]

The "Krasnyi Kozhevnik" Leather Factory in Torzhok improves the production technology. Kozh.-obuv.prom. 5 no.2:32-35 F '63. (MIRA 16:5)

1. Glavnyy insh. Torzhokskogo kozhevennogo zavoda "Krasnyy kozhevnik".

(Torzhok--Leather industry)

ZHDANOV, I. L.

PA 32/49T6

USSR/Electricity Sep 48
Switches, Transfer
Electric Cutouts

"'Paket' Cutout Switches and Transfer Switches," I. L. Zhdanov, Engr, Tashkent Electromech Plant, Min of Elec Ind, 2¼ pp

"Vest Elektro-Prom" No 9

Treats under: contact system, change-over mechanism, technical data, 'paket' change-over switches in USSR, and application. Manually operated rotary gang switch (4-position) for low-frequency apparatus where compactness is primary consideration. Includes five diagrams. FDB 32/49T6

ZHDANOV, I.L.

Automatic line for the processing of industrial wool. Kozh.-obuv.prom. 4 no.4:20-21 Ap '62. (MIRA 15:5)

1. Glavnyy inzhener Torzhokskogo kozhevennogo zavoda "Krasnyy kozhevnik".
(Leather industry--By-products) (Automatic control)